baseplate and the at least three surface points to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

51. (amended) The mounting interface of claim 50 wherein the damping ring further comprises a seal disposed on the [vertical] portion on [an] the outer surface of the at least three surface points of the mounting interface, the seal forming a barrier in a gap between the motor and the baseplate.

REMARKS

Claims 1-51 are pending in the patent application. Claims 1, 5, 8, 11, 12, 14-16, 20, 23, 26, 27, 29, 30, 31, 35, 38, 41-48, 50 and 51 have been amended. No new matter has been added.

Claims 5, 11, 12, 14, 15, 20, 26, 27, 29, 30, 35, 41-45, 47, 48, 50 and 51 are rejected under 35 U.S.C. § 112, second paragraph for being vague and indefinite. these claims have been amended. It is believed that all claims comply with 35 U.S.C. § 112.

Claims 1, 2, 4-8, 31, 33-38 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mayumi et al. (U.S. Patent No. 4,806,811) (Mayumi). Mayumi (Fig. 2A) discloses a motor casing (1), having a number of motor mounting portions (3) positioned at one end, each of the motor mounting positions having a mounting hole (4) passing therethrough. The motor mounting portions are provided on the motor casing in order to provide a surface that can be machined with high accuracy in a mass production process (col. 3, lines 17-21).

In the present invention, there is a realization of the need to dissipate distortion energy emanating from vibration modes of the disk drive motor, and to provide a mounting interface between the motor and the baseplate that stabilizes the baseplate/mount. Accordingly, the invention of amended claim 1 is directed to a mounting interface for providing a steadfast relationship between a motor and a baseplate. The mounting interface includes at least three surface points forming a single plane acting as a common boundary between the motor and the baseplate, the

positions of the at least three surface points being selected to affect a vibrational characteristic of the motor.

Moreover the invention of amended claim 31 is directed to a method for reducing acoustic dynamics of a spindle motor. The method includes forming a mounting interface between a spindle motor and a baseplate, the mounting interface comprising at least three surface points forming a single plane acting as a common boundary between the spindle motor and the baseplate, positions of the at least three surface points being selected to affect a vibrational characteristic of the motor.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102.

Applicants respectfully submit that Mayumi does not teach every element of claims 1 and 31, and therefore fails to anticipate claims 1 and 31. Mayumi does not disclose that the positions of the motor mounting portions are selected to affect a vibrational characteristic of the motor. Mayumi is silent as to vibration in the motor.

Therefore, since Mayumi does not disclose all the limitations of amended claims 1 and 31, the inventions of amended claims 1 and 31 are not anticipated by Mayumi, and are patentable.

Claims 2, 4-8 and 33-38 further define the inventions of claims 1 and 31 and depend therefrom. Accordingly, since claims 1 and 31 are allowable, claims 2, 4-8 and 33-38 are also allowable.

Regarding claims 6 and 36, Mayumi does not state that the area of the motor mounting portions is selected so as to reduce acoustical noise. Mayumi is silent on this point.

Regarding claims 7 and 37, Mayumi fails to teach that the three surface points are formed of a material chosen to select acoustical noise. Instead, Mayumi teaches that the material of the motor mounting portions is the same as the motor casing.

Regarding claims 8 and 38, Mayumi fails to disclose that the positions of the at least three surface points are set with a predetermined radial angle therebetween so as to reduce acoustical noise. Mayumi is silent on the problem of vibration and acoustical noise.

Claims 3, 9-15, 32 and 39-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mayumi. The Office Action states that Mayumi fails to a damping ring. The Examiner takes Official Notice that it was old and well known in the art to provide a damping ring to dissipate distortion energy, and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Mayumi's mounting surface with a damping ring. The Office Action states that the motivation would have been to reduce the transmitted vibrations produced during operation of the motor.

To establish *prima facie* obviousness of a claimed invention, the Examiner has the burden of proving that three basic criteria are met. First, there must be some suggestion or motivation to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure. All three of these criteria must be met in order to support a finding of *prima facie* obviousness of a claimed invention (*see, e.g.,* MPEP § 2142).

Applicants respectfully assert that disposing a damping ring on an inner side and between at least three surface points of a mounting interface for dissipating distortion energy do not constitute facts outside of the record which are capable of instant and unquestionable demonstration as being "well-known" in the art. The references relied on by the Examiner, for example, fail to disclose this purportedly "well known" fact. Furthermore, the Officially Noticed facts do not teach or suggest several of the specifically claimed configurations, as is discussed in detail below. Applicants contend

that reasonable doubt exists regarding the circumstances justifying the Examiner's exercise of official notice, and request that the Examiner provide evidence that demonstrates the appropriateness of the officially noticed facts pursuant to MPEP § 2144.03, and also that the Examiner explain how the officially noticed facts teach the specific limitations of all claims that are rejected under the officially noticed facts. Applicants reserve the opportunity to respond to the Examiner's comments concerning any such officially noticed facts.

Although the Examiner has taken Official Notice of the use of a damping ring, the Official Action fails to show how Mayumi and the officially noticed facts disclose all the features of every claim. The claim must be obvious as a whole: all words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson* 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), see also MPEP § 2143.03.

Regarding claims 9, 39 and 46, the Official Action fails to show how the modified prior art teaches or suggests the particular limitation of a damping ring disposed on an inner side and between the at least three surface points for dissipating surface energy.

Regarding claims 11 and 41, the modified prior art fails to teach or suggest the claimed feature of the damping ring including a portion perpendicular to the single plane on an outer surface of the at least three surface points of the mounting interface, or that the portion engages with the baseplate to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

Regarding claims 12, 15, 42 and 45, the modified prior art fails to teach or suggest that the damping ring forms a seal on the portion perpendicular to the single plane, and also fails to teach or suggest that the seal forms a barrier in a gap between the mount flange and the baseplate.

Regarding claims 14 and 44, the modified prior art fails to teach or suggest that the damping ring includes a portion perpendicular to the single plane on an outer surface of the at least three surface points , where the portion engages with the baseplate and the at least three surface points to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

Therefore, since the modified prior art fails to teach or suggest all the limitations of the claims 9-15 and 39-45, there is no *prima facie* case of obviousness against these claims, and claims 9-15 and 39-45 are patentable over the cited art.

Claims 3 and 32 further define and depend from allowable claims 1 and 31. Therefore, these claims are also allowable.

Amended claim 46 is directed to a mounting interface for providing a steadfast relationship between a motor and a baseplate. The mounting interface includes a damping ring disposed on an inner side and between at least three surface points, the damping ring dissipating distortion energy. The positions of the at least three surface points are selected so as to affect a vibrational characteristic of the motor.

As has been discussed above, Mayumi fails to teach or suggest the selection of the positions of the at least three surface points so as to affect a vibrational characteristic of the motor. The Officially Noticed facts fail to correct the deficiency of Mayumi. Accordingly, the modified prior art fails to teach or suggest all the limitations of amended claim 46. Therefore, there is no *prima facie* case of obviousness against claim 46, which is patentable over the cited art.

Claims 47-51 further define the invention of amended claim 46 and depend therefrom. Furthermore, the modification of Mayumi by the Officially Noticed facts fails to teach or disclose the particular features of claims 47-51.

Regarding claim 47, the modified prior art fails to teach or suggest the claimed feature of the damping ring including a portion on an outer surface of the at least three surface points of the mounting interface, or that the portion engages with the baseplate to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

Regarding claims 48 and 51, the modified prior art fails to teach or suggest that the damping ring forms a seal on the portion, and also fails to teach or suggest that the seal forms a barrier in a gap between the mount flange and the baseplate.

Regarding claims 50, the modified prior art fails to teach or suggest that the damping ring includes a portion on an outer surface of the at least three surface points , where the portion engages with the baseplate and the at least three surface points to

dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

Therefore, since the modified prior art fails to teach or suggest all the limitations of the claims 47-51, there is no *prima facie* case of obviousness against these claims, and claims 47-51 are patentable over the cited art.

Claims 16-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Elsing et al (U.S. Patent 5,847,476) (Elsing) in view of Mayumi. The Office Action states that Elsing shows a data storage system comprising a storage medium, an actuator including a transducer on an actuator arm, an actuator motor for moving the transducer relative to the storage medium, a baseplate, a spindle motor for rotating the storage medium, a mount flange on the motor and a mounting interface disposed between the mount flange and the baseplate. The Office Action states that Elsing does not disclose a mounting interface comprising at least three surface points forming a single plane acting as a common boundary between the mount flange and the baseplate. The Office Action further states that Mayumi discloses the mounting interface and that it would have been obvious to one of ordinary skill in the art to provide the data storage system of Elsing with Mayumi's mounting interface. The motivation given for such a combination is to separate a large vibrating source into smaller vibrating sources thus reducing the vibration level of the structure.

The mounting interface of amended claim 16 includes at least three surface points forming a single plane acting as a common boundary between the mount flange and the baseplate, positions of the at least three surface points being selected to affect a vibrational characteristic of the spindle motor.

As has been discussed above, Mayumi fails to teach or suggest that the positions of the least three surface points are selected to affect the vibrational characteristic of the spindle motor. Elsing fails to correct this deficiency of Mayumi. Therefore, the proposed combination of Elsing and Mayumi fails to teach and suggest all the limitations of claim 16. Therefore, there is no *prima facie* case of obviousness against claim 16, and claim 16 is patentable over the proposed combination of references. .

Claims 17-30 further define and depend from claim 16. Accordingly, these claims should also be patentable.

Regarding claim 21, neither Elsing nor Mayumi teach or suggest that the surface area of the three surface points is selected to reduce acoustical noise. The two references are silent on this issue.

Regarding claim 22, neither Elsing nor Mayumi teach or suggest that the three surface points are formed of a material chosen to select acoustical noise. Instead, Mayumi teaches that the material of the motor mounting portions is the same as the motor casing.

Regarding claim 23, neither Elsing nor Mayumi teach or suggest that the positions of the at least three surface points are set with a predetermined radial angle therebetween so as to reduce acoustical noise. Mayumi is silent on the problem of vibration and acoustical noise.

Regarding claims 24 - 30, Official notice is given that it is old and well known in the art to provide a damping ring to dissipate distortion energy, and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the mounting surface with a damping ring.

Applicants reiterates the objection to the officially noticed facts provided above with regard to the rejection of claims 9-15 and 39-51. The proposed combination of Elsing and Mayumi, modified by the officially noticed facts fails to teach or suggest the limitations of the claims. In particular, with regard to claim 24, the modified combination of references fails to teach or suggest that the damping ring is disposed on an inner side and between the at least three surface points for dissipating distortion energy.

With regard to claim 26, the modified combination of references fails to teach or suggest a damping ring that includes a portion perpendicular to the single plane on an outer surface of the at least three surface points of the mounting interface, or that the portion engages with the baseplate to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

With regard to claims 27 and 30, the modified combination of references fails to teach or suggest that the damping ring includes a seal on the portion perpendicular to

the single plane, and also fails to teach or suggest that the seal forms a barrier in a gap between the mount flange and the baseplate.

With regard to claim 29, the modified combination of references fails to teach or suggest that the damping ring includes a portion perpendicular to the single plane on an outer surface of the at least three surface points, where the portion engages with the baseplate and the at least three surface points to dissipate energy resulting from sheer distortion between the baseplate and the at least three surface points.

Therefore, since the modified prior art fails to teach or suggest all the limitations of the claims 17-30, there is no *prima facie* case of obviousness against these claims, and claims 17-30 are patentable over the cited art.

In view of the amendments and reasons provided above, Claims 1-51 are in condition for allowance. Applicants respectfully requests favorable reconsideration and early allowance of all pending Claims.

The Examiner is invited to contact the below-signed agent at (952) 912- 0571 to discuss any further issues related to this case.

Respectfully submitted,

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